

ABSTRACT

An internal combustion engine having a camshaft which is translatable between first and second positions to control an engine operating characteristic. The camshaft is rotationally driven from the engine crankshaft, and includes an oil pump member in fluid communication with the oil sump of the engine. During rotation of the camshaft, the oil pump member pumps oil from the oil sump to various lubrication points in the engine, and also generates an oil pressure which acts upon at least a portion of the camshaft. At low engine speeds, the oil pressure is insufficient to translate the camshaft. However, at high engine speeds, the oil pressure is sufficient to translate the camshaft axially during running of the engine, and the camshaft returns to its initial position when the speed of the engine decreases. Translation of the camshaft may facilitate an automatic compression and/or vacuum release feature, a low and high speed cam switching feature, or a low oil shutdown feature, for example.